

Remark

Applicants respectfully request reconsideration of this application as amended. No Claims have been amended. Claim 10 has previously been cancelled. Therefore, claims 1-9 and 11-22 remain present for examination.

35 U.S.C. §103 Rejection

Namekata in view of Smith

The Examiner has rejected claims 1-9, 11, 13-14, 16-17, and 19-22 under 35 U.S.C. §103(a) as being unpatentable over Namekata et al., U.S. Patent No. 6,249,250 ("Namekata") in view of Smith et al., U.S. Patent No. 5,912,927 ("Smith").

Considering Namekata, the operation of the invention is quite clear from the specification itself. "However, the anti-multipath propagation characteristic of the OFDM is not sufficient to successfully avoid deterioration of reception characteristic by the severe frequency selection fading generated by the multipath propagation." (Col. 2, lines 21-24.)

"However the adaptive variable directional antenna is designed depending on the radio frequency used for communications, and a generated directional pattern is effective only for a specific radio frequency." (Col. 2, lines 61-65)

"It is an object of the present invention to provide an adaptive variable directional antenna capable of having uniform directional control over all frequency components in the band of broadband transmitting signals." (Col. 3, lines 41-44)

As these sections make clear, Namekata fine tunes the weights for each subcarrier so that they all travel the same part. The difference in the weights is not to create a different direction but to compensate for frequency.

"As shown by the equation (6),, the optimum receiving excitation weight of the antenna element 21#1 depends on the receiving frequency f_R and the subcarrier frequency f_j ." (Col. 13, lines 32-34)

Claim 1 recites, for example, "wherein each of the sub-carriers is to be transmitted over an array of N antennas using a different antenna path for each signal." In Namekata each sub-carrier is to be transmitted using the same antenna path. Claim 1 further recites, "to ensure that each of the N signals of each sub-carrier of the wireless communication channel propagates along a different physical path to the receiver."

Given this significant difference in object and purpose between Claim 1 and the reference, Applicant respectfully submits that the rejection is traversed.

35 U.S.C. §103 Rejection

Namekata and Smith in view of Wu

The Examiner has rejected claim 18 under 35 U.S.C. §103(a) as being unpatentable over Namekata et al., U.S. Patent No. 6,249,250 ("Namekata") and Smith et al., U.S. Patent No. 5,912,927 ("Smith"), and further in view of Wu, U.S. Patent No. 6,985,434 ("Wu"). This rejection relies on the rejection discussed above and is traversed on the same grounds, *inter alia*.

Allowable Subject Matter

Claims 1-21 were indicated as allowable if rewritten or amended to overcome the claim objections set forth in this Office Action. Applicant thanks the Examiner for the indication of allowable subject matter. These claims remain in the application.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

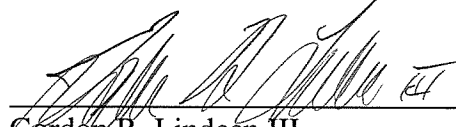
Request for an Extension of Time

Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
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